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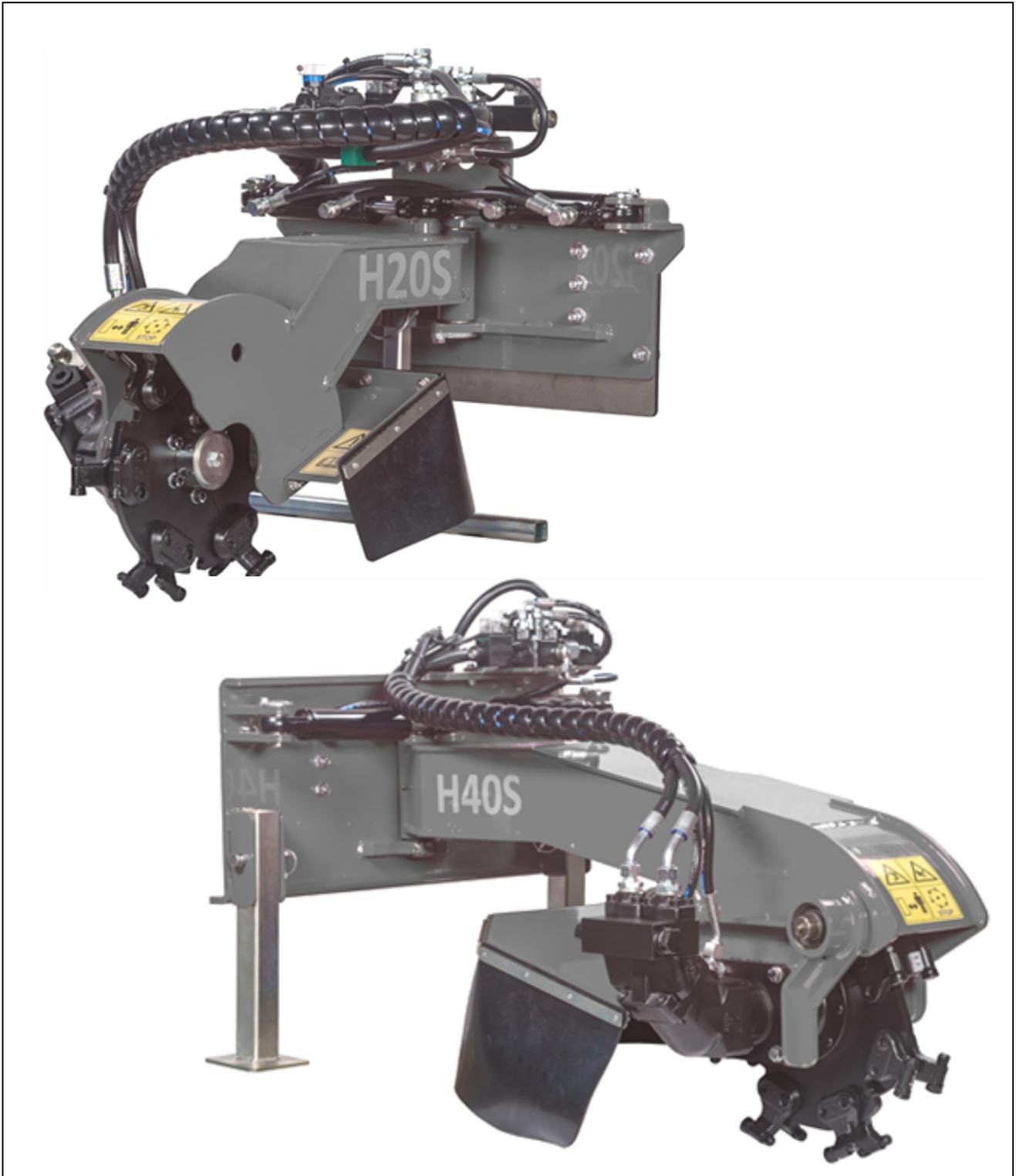


McCONEl ROBO-GRIND

STUMP GRINDER ATTACHMENT

Models: H20S-40 / H40S-56 / H40S-75

Operator Manual



IMPORTANT

VERIFICATION OF WARRANTY REGISTRATION



Dealer Warranty Information & Registration Verification

It is imperative that the selling dealer registers this machine with McConnel Limited before delivery to the end user – failure to do so may affect the validity of the machine warranty.

To register machines; log onto <https://my.mcconnel.com> and select 'Machine Registration' which can be found in the 'Warranty' section of the site. **Confirm to the customer that the machine has been registered by completing the verification form below.**

Registration Verification	Serial No. <input type="text"/>
Dealer Name:	
Dealer Address:	
Customer Name:	
Date of Warranty Registration:/...../.....	Dealer Signature:

Note to Customer / Owner

Please ensure the section above has been completed and signed by the dealer to verify your machine has been registered with McConnel Limited.

IMPORTANT: During the initial 'bedding in' period of a new machine it is the customer's responsibility to regularly inspect all nuts, bolts and hose connections for tightness and re-tighten if required. New hydraulic connections occasionally weep small amounts of oil as the seals and joints settle in – where this occurs it can be cured by re-tightening the connection – *refer to torque settings chart below*. The tasks stated above should be performed on an hourly basis during the first day of work and at least daily thereafter as part of the machine's general maintenance procedure.

CAUTION: DO NOT OVER TORQUE HYDRAULIC FITTINGS AND HOSES

Torque Settings for Hydraulic Fittings

Hydraulic Hose Ends		
BSP	Setting	Metric
1/4"	18 Nm	19 mm
3/8"	31 Nm	22 mm
1/2"	49 Nm	27 mm
5/8"	60 Nm	30 mm
3/4"	80 Nm	32 mm
1"	125 Nm	41 mm
1.1/4"	190 Nm	50 mm
1.1/2"	250 Nm	55 mm
2"	420 Nm	70 mm

Port Adaptors with Bonded Seals		
BSP	Setting	Metric
1/4"	34 Nm	19 mm
3/8"	47 Nm	22 mm
1/2"	102 Nm	27 mm
5/8"	122 Nm	30 mm
3/4"	149 Nm	32 mm
1"	203 Nm	41 mm
1.1/4"	305 Nm	50 mm
1.1/2"	305 Nm	55 mm
2"	400 Nm	70 mm

WARRANTY POLICY

WARRANTY REGISTRATION

All machines must be registered, by the selling dealer with McConnel Ltd, before delivery to the end user. On receipt of the goods it is the buyer's responsibility to check that the Verification of Warranty Registration in the Operator's Manual has been completed by the selling dealer.

1. LIMITED WARRANTIES

- 1.01. *All mounted machines supplied by McConnel Ltd are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 12 months, unless a different period is specified.
All Self Propelled Machines supplied by McConnel Ltd are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 12 months or 1500 hours. Engine warranty will be specific to the Manufacturer of that unit.*
- 1.02. *All spare parts supplied by McConnel Ltd and purchased by the end user are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 6 months. All parts warranty claims must be supported by a copy of the failed part invoice to the end user. We cannot consider claims for which sales invoices are not available.*
- 1.03. *The warranty offered by McConnel Ltd is limited to the making good by repair or replacement for the purchaser any part or parts found, upon examination at its factory, to be defective under normal use and service due to defects in material or workmanship. Returned parts must be complete and unexamined. Pack the component(s) carefully so that any transit damage is avoided. All ports on hydraulic items should be drained of oil and securely plugged to prevent seepage and foreign body ingress. Certain other components, electrical items for example, may require particular care when packing to avoid damage in transit.*
- 1.04. *This warranty does not extend to any product from which McConnel Ltd's serial number plate has been removed or altered.*
- 1.05. *The warranty policy is valid for machines registered in line with the terms and conditions detailed and on the basis that the machines do not extend a period of 24 months or greater since their original purchase date, that is the original invoice date from McConnel Limited.
Machines that are held in stock for more than 24 months cannot be registered for warranty.*
- 1.06. *This warranty does not apply to any part of the goods, which has been subjected to improper or abnormal use, negligence, alteration, modification, fitment of non-genuine parts, accident damage, or damage resulting from contact with overhead power lines, damage caused by foreign objects (e.g. stones, iron, material other than vegetation), failure due to lack of maintenance, use of incorrect oil or lubricants, contamination of the oil, or which has served its normal life. This warranty does not apply to any expendable items such as blades, belts, clutch linings, filter elements, flails, flap kits, skids, soil engaging parts, shields, guards, wear pads, pneumatic tyres or tracks.*
- 1.07. *Temporary repairs and consequential loss - i.e. oil, downtime and associated parts are specifically excluded from the warranty.*
- 1.08. *Warranty on hoses is limited to 12 months and does not include hoses which have suffered external damage. Only complete hoses may be returned under warranty, any which have been cut or repaired will be rejected.*
- 1.09. *Machines must be repaired immediately a problem arises. Continued use of the machine after a problem has occurred can result in further component failures, for which McConnel Ltd cannot be held liable, and may have safety implications.*
- 1.10. *If in exceptional circumstances a non McConnel Ltd part is used to effect a repair, warranty reimbursement will be at no more than McConnel Ltd's standard dealer cost for the genuine part.*

- 1.11. *Except as provided herein, no employee, agent, dealer or other person is authorised to give any warranties of any nature on behalf of McConnell Ltd.*
- 1.12. *For machine warranty periods in excess of 12 months the following additional exclusions shall apply:*
 - 1.12.1. *Hoses, exposed pipes and hydraulic tank breathers.*
 - 1.12.2. *Filters.*
 - 1.12.3. *Rubber mountings.*
 - 1.12.4. *External electric wiring.*
 - 1.12.5. *Bearings and seals*
 - 1.12.6. *External Cables, Linkages*
 - 1.12.7. *Loose/Corroded Connections, Light Units, LED's*
 - 1.12.8. *Comfort items such as Operator Seat, Ventilation, Audio Equipment*
- 1.13. *All service work, particularly filter changes, must be carried out in accordance with the manufacturer's service schedule. Failure to comply will invalidate the warranty. In the event of a claim, proof of the service work being carried out may be required.*
- 1.14. *Repeat or additional repairs resulting from incorrect diagnosis or poor quality previous repair work are excluded from warranty.*

NB Warranty cover will be invalid if any non-genuine parts have been fitted or used. Use of non-genuine parts may seriously affect the machine's performance and safety. McConnell Ltd cannot be held responsible for any failures or safety implications that arise due to the use of non-genuine parts.

2. REMEDIES AND PROCEDURES

- 2.01. *The warranty is not effective unless the Selling Dealer registers the machine, via the McConnell web site and confirms the registration to the purchaser by completing the confirmation form in the operator's manual.*
- 2.02. *Any fault must be reported to an authorised McConnell Ltd dealer as soon as it occurs. Continued use of a machine, after a fault has occurred, can result in further component failure for which McConnell Ltd cannot be held liable.*
- 2.03. *Repairs should be undertaken within two days of the failure. Claims submitted for repairs undertaken more than 2 weeks after a failure has occurred, or 2 days after the parts were supplied will be rejected, unless the delay has been authorised by McConnell Ltd. Please note that failure by the customer to release the machine for repair will not be accepted as a reason for delay in repair or submitting warranty claims.*
- 2.04. *All claims must be submitted, by an authorised McConnell Ltd Service Dealer, within 30 days of the date of repair.*
- 2.05. *Following examination of the claim and parts, McConnell Ltd will pay, at their discretion, for any valid claim the invoiced cost of any parts supplied by McConnell Ltd and appropriate labour and mileage allowances if applicable.*
- 2.06. *The submission of a claim is not a guarantee of payment.*
- 2.07. *Any decision reached by McConnell Ltd. is final.*

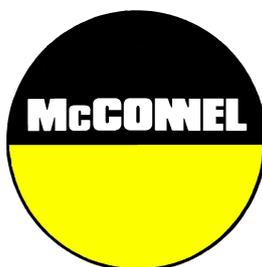
3. LIMITATION OF LIABILITY

- 3.01. *McConnell Ltd disclaims any express (except as set forth herein) and implied warranties with respect to the goods including, but not limited to, merchantability and fitness for a particular purpose.*
- 3.02. *McConnell Ltd makes no warranty as to the design, capability, capacity or suitability for use of the goods.*
- 3.03. *Except as provided herein, McConnell Ltd shall have no liability or responsibility to the purchaser or any other person or entity with respect to any liability, loss, or damage caused or alleged to be caused directly or indirectly by the goods including, but not limited to, any indirect, special, consequential, or incidental damages resulting from the use or operation of the goods or any breach of this warranty. Notwithstanding the above limitations and warranties, the manufacturer's liability hereunder for damages incurred by the purchaser or others shall not exceed the price of the goods.*
- 3.04. *No action arising out of any claimed breach of this warranty or transactions under this warranty may be brought more than one (1) year after the cause of the action has occurred.*

4. MISCELLANEOUS

- 4.01. McConnel Ltd may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.*
- 4.02. If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.*
- 4.03. Applicable law may provide rights and benefits to the purchaser in addition to those provided herein.*

McConnel Limited



For Safety and Performance...

ALWAYS READ THIS BOOK FIRST

McCONEL LIMITED

**Temeside Works
Ludlow
Shropshire
England**

**Telephone: 01584 873131
www.mcconnel.com**

NOISE STATEMENT

The equivalent daily personal noise exposure from this machine measured at the operators' ear is within the range 78 – 85 dB, these figures apply to a normal distribution of use where the noise fluctuates between zero and maximum. The figures assume that the machine is fitted to a tractor with a 'quiet' cab with the windows closed in a generally open environment. We recommend that the windows are kept closed. With the cab rear window open the equivalent daily personal noise exposure will increase to a figure within the range 82 – 88 dB. At an equivalent daily noise exposure level of 85 – 90 dB ear protection is recommended and must always be used if any window is left open.

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GENERAL INFORMATION

Read this manual before fitting or operating the machine or accessory. Whenever any doubt exists contact your local dealer or the McConnel Service Department for assistance.

Only use 'Genuine McConnel Parts' on McConnel machinery and equipment.

DEFINITIONS: *The following definitions apply throughout this manual;*

⚠ DANGER

DANGER: *Alerts to a hazardous situation which will result in death or serious injury if not observed carefully.*

⚠ WARNING

WARNING: *Alerts to a hazardous situation which could result in death or serious injury if not observed carefully.*

⚠ CAUTION

CAUTION: *Alerts to a hazardous situation which could result in damage to the machine and/or equipment if not observed carefully.*

NOTICE

NOTICE: *Specific or general information considered important or useful to emphasise.*

SERIAL PLATE

All machines are equipped with a serial number plate containing important information relating to the machine including a unique serial number used for identification purposes.

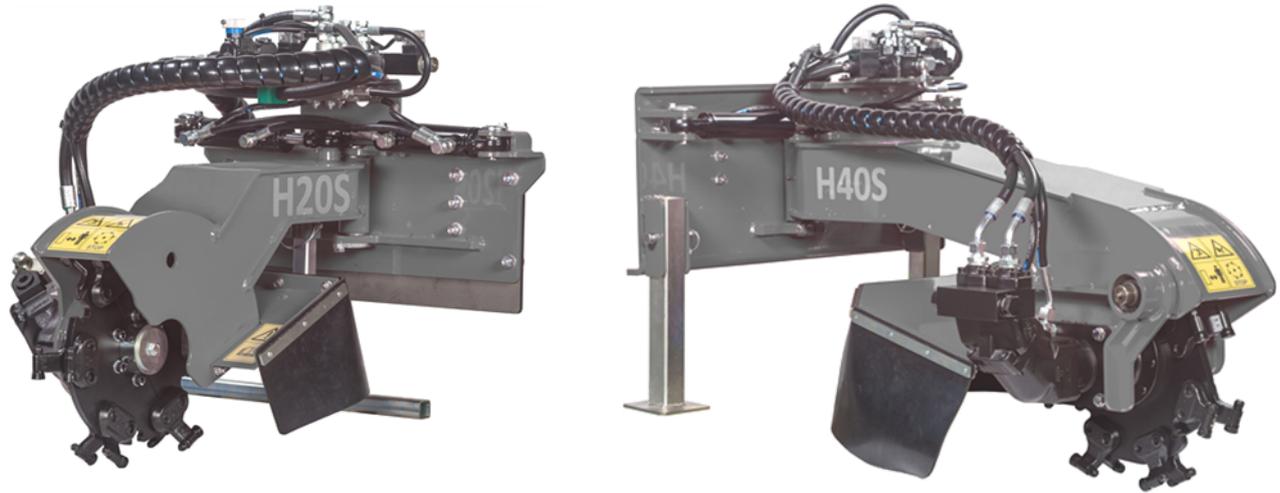
Note: Images in this manual are provided for instruction and informational purposes only and may not show components in their entirety. In certain instances images may appear different to the actual machine; where this occurs the general procedure will be basically the same. E&OE.

MACHINE & DEALER INFORMATION

Record the serial number of your machine on this page and always quote it when ordering parts. Whenever information concerning the machine is requested remember to also state the make and model of tractor to which the machine is fitted.	
Machine Serial Number:	Installation Date:
Machine Model Details:	
Dealer Name & Branch:	
Dealer Address:	
Dealer Telephone No:	
Dealer Email Address:	

MACHINE DESCRIPTION

The 'ROBO-GRIND' machine is a stump grinding attachment specifically designed for use on McConnel Robocut machines. The purpose of the machine is solely for use as a tree stump grinder. These machines must never be used to perform any task they are not designed for; this would be dangerous to persons and will risk damage to machine and/or components.



TECHNICAL SPECIFICATIONS

Model	H20S-40	H40S-56	H40S-75
Power requirements (kW/HP)	30kW/40HP	42kW/56HP	56kW/75HP
Oil flow (l/minute)	30-50	50-75	80-110
Oil pressure (max. bar)	350	350	350
Cutting Head			
Cutter wheel diameter (mm)	370	370	370
Tooth system	FSI 21 (3x rotatable)	FSI 25 (3x rotatable)	FSI 25 (3x rotatable)
No. of teeth	12	16	16
Max cutting depth per sweep	24.5mm	52mm	52mm
Sweep system	Hydraulic 2 x 37°	Hydraulic 2 x 37°	Hydraulic 2 x 37°
Sweep width (cm)	70	110	110
Dimensions			
Length (mm)	810	1240	1240
Width (mm)	690	800	800
Height (mm)	580	750	620
Weight (kg)	92	210	260



The following information relates to Robocut machines equipped with a Robo-Stump Grinder attachment.

Operators must read and fully understand the operating manuals for both machines before attempting to use this equipment.

This machine has the potential to be extremely dangerous - in the wrong hands it can kill or maim; It is therefore imperative that both owner and operator of the machine reads and understands the following section to ensure they are fully aware of the dangers that do, or may exist, and their responsibilities surrounding the use and operation of the machine.

The operator of this machine is responsible not only for their own safety but equally for the safety of others who may come into the close proximity of the machine, as the owner you are responsible for both.

When the machine is not in use it should be parked on a firm level site with the grinder resting on the ground and the starting key removed.

In the event of any fault being detected with the machine's operation it must be stopped immediately and not used again until the fault has been corrected by a qualified technician.

- ⚠** *Before starting the machine the operator must read and understand all aspects of use and maintenance of the machine as stated in the specific operation manual.*
- ⚠** *The machine must only be used by a responsible adult who is familiar with all aspects relating to safe operation.*
- ⚠** *The machine must not be operated by children or non-authorized persons.*
- ⚠** *Operators must know the meaning of all operation and safety decals on the machine, the attachment, and the remote-control unit.*
- ⚠** *Operators must know the procedure for switching the machine off normally and by using the Emergency Stop.*
- ⚠** *Do not attempt to use the machine if the Emergency Stop switch is either damaged or malfunctioning.*
- ⚠** *Never use the machine with safety guarding removed or defective.*
- ⚠** *Operators should practice operation on flat open ground to familiarise themselves with driving and manoeuvring the machine before attempting to use it on sloping ground.*

- ⚠ Operators should practice manoeuvring the machine around obstacles without the grinder running before using the machine for work purposes.*
- ⚠ Never operate the machine when your vision is blocked by obstacles such as vehicles, buildings, hedges etc.; move to a position where you have an un-interrupted view of the machine.*
- ⚠ Never operate the machine standing directly in the line of travel.*
- ⚠ Do not use the machine on sand piles, gravel, or similar materials.*
- ⚠ Only operate the machine in good light conditions.*
- ⚠ Never run the machine in an enclosed area or building.*
- ⚠ Keep the machine clean to avoid build ups of dry materials that could ignite on hot components.*
- ⚠ Never stand directly below a machine that is operating or parked on a slope.*
- ⚠ Always operate the joystick control slowly; rapid or jerky movements can cause the machine to rear up causing loss of control.*
- ⚠ When operating the machine with the grinder running the operator must remain at least 5 metres away from the machine; always switch the grinder off before approaching it.*
- ⚠ When using the machine the operator should place themselves in a position that provides optimum visibility over the work area.*
- ⚠ Never leave a running machine unattended; always switch the engine off and remove the ignition key.*
- ⚠ Always stop and switch the machine off if persons or animals enter the work area, do not restart the machine until they are at a safe distance.*
- ⚠ Never use the machine to perform tasks it was not designed for.*
- ⚠ Never ride, or allow others to ride, on the machine.*
- ⚠ Always inspect the work area prior to operation and remove stones, glass, metal, wire, or any other foreign objects that are hazardous. Immovable hazards should be 'marked' so they can be avoided.*
- ⚠ Take extra care when operating the machine on slopes or uneven ground, there is increased risk of objects being thrown from the flail head when working in these conditions.*
- ⚠ The machine can be used on slopes of up to 50° (maximum) providing the surface is dry and firm.*
- ⚠ Should a machine overturn, a suitable crane or winch should be used to recover it, keep all persons at a safe distance before and during recovery.*
- ⚠ Do not operate the machine in foggy or frosty conditions as there is increased risk of accidents.*
- ⚠ Take extra care when working in close proximity to electrical cables; in some circumstances, operating the machine under overhead power lines can result in loss of radio signal causing the engine to deactivate.*
- ⚠ Do not operate the machine close to vehicles or properties where there is risk of damage by objects accidentally thrown from the grinder.*

-  *It is the user's responsibility to protect persons in or near the work zone.*
-  *When servicing or maintaining the machine no one should be allowed beneath it when it is raised unless it is securely supported on suitable ramps or stands.*
-  *Never attempt to service or maintain the machine whilst it is running; always switch off the engine and remove the starting key.*
-  *When transporting the machine on another vehicle or trailer the engine must be switched off and the machine chocked and secured using suitable ropes or chains.*
-  *Check the condition of the cutting teeth and fixings on a regular basis; never use the machine with damaged/missing cutting teeth or loose fixings.*
-  *Always clean the machine after use; care must be taken if the machine is hot. Never use solvent based chemicals for cleaning.*
-  *When operating in excessively dusty conditions work may need to be interrupted on a regular basis to remove any build ups of dust on components that could cause overheating.*
-  *Always engage the Emergency Stop switch before refuelling.*
-  *Wherever possible refuel the machine before work when the engine is cold. If refuelling during work, switch off the engine and allow it to cool before adding fuel.*
-  *Test Emergency Stop switches before each period of work to ensure they functions correctly.*
-  *Never leave the machine, ignition key and control unit unattended where it could be started and used by un-authorized persons.*
-  *Any inspection, service or maintenance of the flail head must only be performed with machine switched off and the starting key removed.*
-  *Always wear safety gloves and glasses when performing service or maintenance on the cutting head.*
-  *Grinders must always be switched off when manoeuvring outside of the work zone.*

Robo-Stump Grinder Safety Procedures

-  *Always check safety functions and wearing parts before starting work.*
-  *Only start cutting on firm safe ground.*
-  *In the event of danger, stop the machine immediately.*
-  *Always stop the cutting head before leaving the control panel.*
-  *Immediately replace faulty and/or worn parts.*
-  *Stop the cutting head before moving or transporting the machine.*
-  *Do not approach hydraulic leaks; high pressure oil can easily puncture skin resulting in serious injury.*

WARNING

Read all instructions thoroughly and follow them precisely. Examine the machine and become fully familiar with it before you attach, operate, inspect, or maintain it. The safety instructions provided in this manual or on the machine are stated to warn of potential hazards. They may also contain information that clarifies or simplifies a procedure.

SAFETY DECALS

Safety Decal Identification & Meaning



⚠️ WARNING

Lifting / Lashing point.
Lifting eyes are designed to lift machine's weight only.



⚠️ WARNING

Use protective goggles and ear defenders.

**Always inspect lifting eye prior to each use.
Use correctly rated safety shackle only through lifting eye.**



⚠️ DANGER

Rotating blades.
Always stop the machine before carrying out any kind of servicing.
Keep hands and feet clear.



⚠️ DANGER

Rotating parts.
Keep hands and feet clear.
Guards must be installed correctly during operation.

Guards may only be removed when carrying out servicing tasks.



⚠️ DANGER

Crushing hazard.
Keep feet clear when operating the machine.



⚠️ DANGER

Failure to follow information contained in the user manual may lead to death or serious injury.

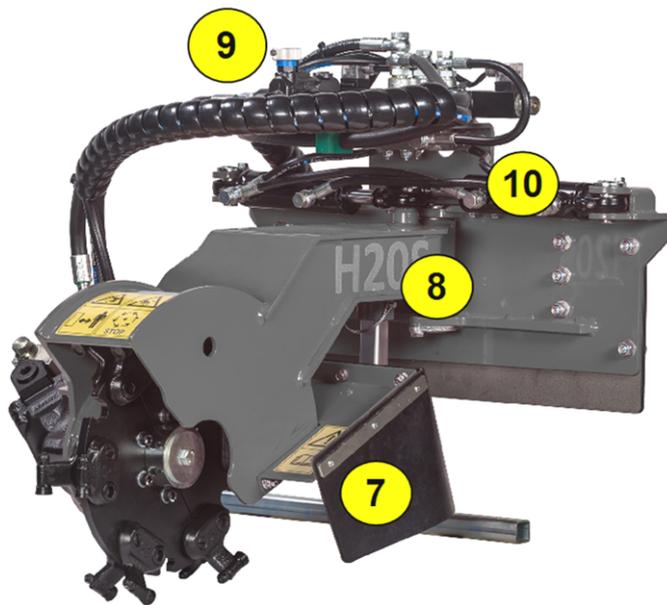
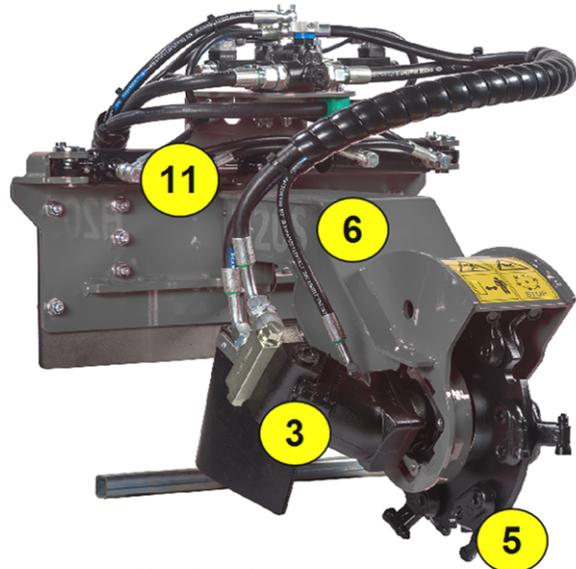
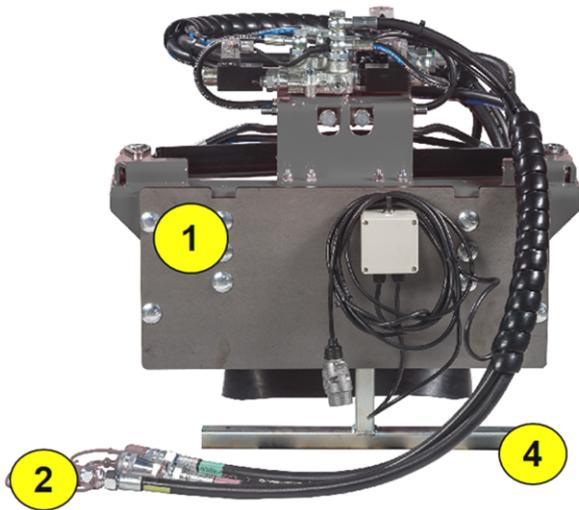


⚠️ DANGER

Risk of flying objects.
Remain at a safe distance from working machine at all times.
Operator must ensure that the safety zone is observed.

MACHINE COMPONENTS

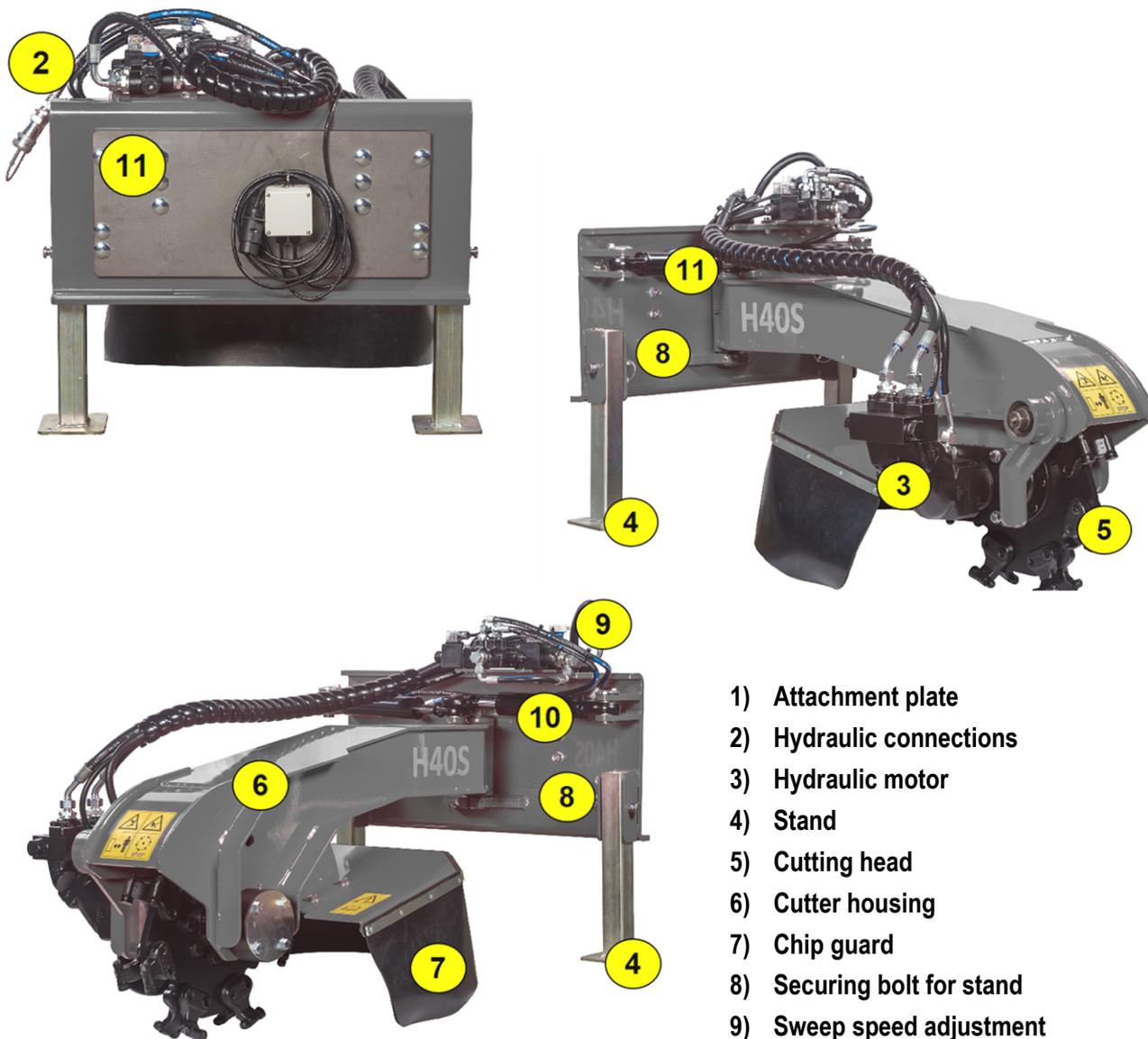
Component Identification : H20S-40 Model



- 1) Attachment plate
- 2) Hydraulic connections
- 3) Hydraulic motor
- 4) Stand
- 5) Cutting head
- 6) Cutter housing
- 7) Chip guard
- 8) Securing bolt for stand
- 9) Sweep speed adjustment
- 10) Hydraulic cylinder, 'sweep left'
- 11) Hydraulic cylinder, 'sweep right'

⚠ CAUTION Remove stand before cutting.

Component Identification : H40S-56 / H40S-75 Models



- 1) Attachment plate
- 2) Hydraulic connections
- 3) Hydraulic motor
- 4) Stand
- 5) Cutting head
- 6) Cutter housing
- 7) Chip guard
- 8) Securing bolt for stand
- 9) Sweep speed adjustment
- 10) Hydraulic cylinder, 'sweep left'
- 11) Hydraulic cylinder, 'sweep right'

⚠ CAUTION Remove stand before cutting.

ATTACHMENT

Attach and secure machine to front mounting frame of Robocut using fixings supplied.

Connect machines hydraulic hoses to the Pressure, Return, Drain line and sweep (*auxiliary*) connection points on Robocut.

⚠ CAUTION

Always clean the hydraulic couplings before fitting to prevent dirt entering the hydraulic system; if dirt enters the system it will significantly impair the lifetime of the hydraulic components.

The amount of oil (l/minute) and system pressure (bar) must not exceed the values stated in the technical specifications section of this manual.

'Run up' the machine to check all functions operate correctly before attempting to use the machine for work.

Sweep Movement Control



Sweep speed is controlled by regulating the oil flow through the valve using the sweep control knob;

- Decrease oil flow = slower sweep speed
- Increase oil flow = faster sweep speed

Hydraulic Hoses and Connections

H20S-40	Pressure	Return	Drain	Sweep	Sweep
Labelling	Pressure	Return	Drain Max 8 bar	Sweep	Sweep
Connection	1/2" Fastener	1/2" Fastener	1/2" Fastener	3/8" Fastener	3/8" Fastener
Hose diameter	1/2"	1/2"	3/8"	1/4"	1/4"

H40S-56	Pressure	Return	Drain	Sweep	Sweep
Labelling	Pressure	Return	Drain Max 8 bar	Sweep	Sweep
Connection	3/4" FF ISO 12	3/4" FF ISO 12	1/2" FF ISO 10	3/8" FF ISO 10	3/8" FF ISO 10
Hose diameter	1/2"	1/2"	3/8"	1/4"	1/4"

H40S-75	Pressure	Return	Drain	Sweep	Sweep
Labelling	Pressure	Return	Drain Max 8 bar	Sweep	Sweep
Connection	3/4" FF ISO 12	3/4" FF ISO 12	1/2" FF ISO 10	3/8" FF ISO 10	3/8" FF ISO 10
Hose diameter	5/8"	5/8"	3/8"	1/4"	1/4"

IMPORTANT: On all models the drain line must be connected to a depressurised return max. 8 bar back pressure.

OPERATION

Maximum cutting depth per sweep

The chip depth is defined by the amount the stump cutter is lowered after a sweep.

The maximum chip depth must never exceed:

H20S Model: 24.5mm

H40S Model: 52mm

The chip depth should be adjusted in accordance with the tool carrier's capacity for optimal use.

Starting Work

⚠ WARNING

- Inspect daily that the cutting teeth and holders are intact and securely fastened. Replace worn teeth and holders when necessary.
 - Always wear the personal protective equipment required for using this type of machinery.
 - Keep clear of the cutting head and moving parts when the machine is operating.
 - Always observe the debris zone, do not allow bystanders to move into the safety zone.
 - Remove stand/support legs before engaging the cutting head.
- 1) Position the machine adjacent to stump with cutting head a slight distance away from stump. Make sure the machine is in a stable position.
 - 2) Raise cutting head clear of stump and engage cutting head.
 - 3) Sweep to either side, lower the spinning cutting head to stump and make a few light passes at stump to get a feel for the cutting action.

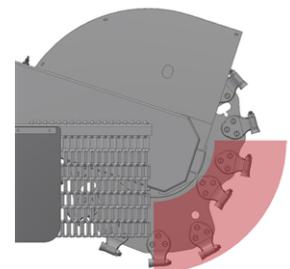
Work away at stump by 'sweeping' the cutting head left-to-right-to-left through stump in a sideways motion. *Smooth, effortless cutting will lengthen machine life and minimize wear on the machine.*

Lower cutting head 'slightly' after each pass. Repeat the process until stump is cut well below ground level.

Once the desired depth has been achieved, raise cutting head free of the stump and position machine closer to stump for the next series of passes and continue cutting.

Proceed until stump has been completely removed to the desired depth. Normally cutting to 15-20cm below ground level is sufficient for subsequent replanting of the area.

For optimum performance, only cut with the section of the cutter wheel highlighted in the picture opposite. Undercutting the stump can cause 'kickback', unwanted vibration, and damage to components.



Stopping Work

- 1) When cutting is finished, disengage the cutting wheel before driving machine away.

Teeth and Holders

When cutting, approximately a third of the tooth face is presented to the material; therefore each tooth has 3x 120° wearing surface and can be rotated twice to permit a new sharp area of the tooth to be presented to the material. For optimal cutting performance, ensure that teeth are kept sharp.

NOTE: As the nut will suffer wear during use, it is recommended to replace this when turning the tooth for the second time; original teeth are supplied with an extra nut for this reason.

Tooth holders must be securely fastened in their correct position; if a holder is missing or worn, the tooth cannot be fitted correctly, and the holder must be replaced.

IMPORTANT: Tooth holders must always be replaced in diagonal pairs to ensure disc balance is maintained.

Cutting Disc



The cutting teeth are mounted in a staggered position for optimal cutting with minimum energy consumption.

Tooth & Holder Replacement

IMPORTANT

- Inspect daily that teeth and holders are intact and securely fastened; *replace worn teeth and holders when necessary.*
- Never use the machine if teeth or holders are missing; *this can create hazardous situations and damage the machine.*
- Replace teeth as required. Teeth do not necessarily wear synchronously, therefore it is not always necessary to rotate or replace all of the teeth at the same time.
- Replace holders as required; if a tooth cannot be securely fitted, replace the holder. Always remember to replace holders in diagonal pairs on the disc to maintain disc balance.
- When rotating the cutting head manually it must be done in the same direction as during normal operation.

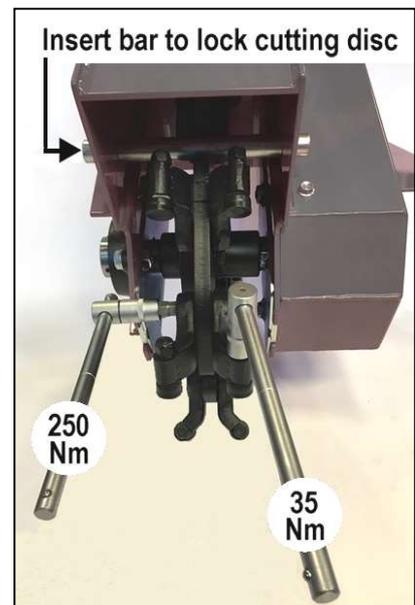
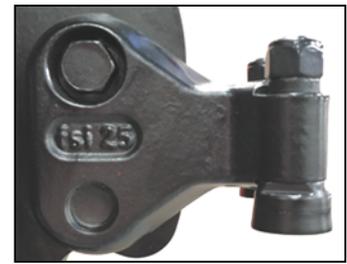
NOTE:

Machines are supplied with a special bar for 'locking' the cutting disc during removal and replacement of teeth and holders, this can be found in the tool kit provided. *Refer to photo above for bar location to 'lock' the cutting disc.*

Tools & Torque Settings

Tooth	T-Wrench with	Torque
FSI 21	1/2" socket	35 Nm
FSI 25	16mm socket	35 Nm

Tooth Holder	T-Wrench with	Torque
FSI 21 type	16mm socket	250 Nm
FSI 25 type	16mm socket	250 Nm



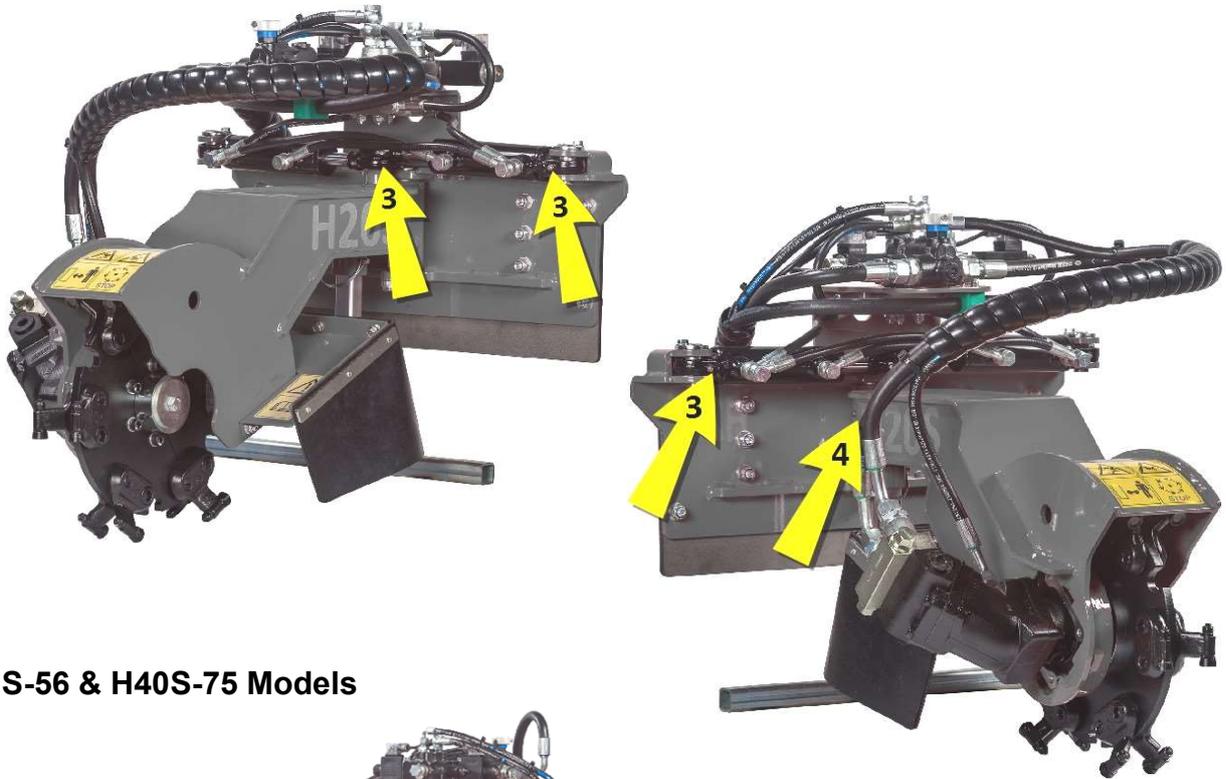
MAINTENANCE

Lubrication

Lubricate the machine at the locations and frequency stated using a quality EP2 grease.

No.	Component	Grease Fitting qty.	Frequency
1.	Cutting Head Bearing	1	25 hours
2.	Anti-vibration Mounts (<i>H40S-56 & H40S-75 models only</i>)	2	100 hours
3.	Hydraulic Cylinder	4	25 hours
4.	Vertical Pivot Point	1	25 hours

H20S Model



H40S-56 & H40S-75 Models



Maintenance Schedule

Interval	Maintenance Task
Every 1 hour	Tighten wearing parts.
Daily / 8 hours	Check wearing parts and tighten if necessary. Inspect / check for hydraulic leaks.
25 hours	Lubricate.
50 hours	Tighten: bolts, nuts, clamps, hoses etc.
100 hours	Lubricate Anti-vibration mounts (<i>H40S-56 & H40S-75 models only</i>).

Cleaning & Storage

Clean the machine on a regular basis and store in a clean, dry, safe environment where it is protected from the elements.

Avoid using a high-pressure washer directly on paintwork, motor, bearings or decals.

Lubricate grease points before and after storage.



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